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ABSTRACT

The unit introduces junior high school students to the different kinds of ground beef available to consumers. Objectives are to identify sources of meat for ground beef and evaluate the different types to determine how each can best be used by the consumer. Activities include identifying types of meat from an illustrated worksheet, buying at least two types of ground beef from the supermarket, and graphing differences in prices. An experiment consists of cooking the beef and weighing the amount of fat. Students also exchange ground beef recipes. Reproducible pre- and posttests and worksheets with keys and directions for conducting activities are included. Approximate class time for the unit is four to six hours. (KC)

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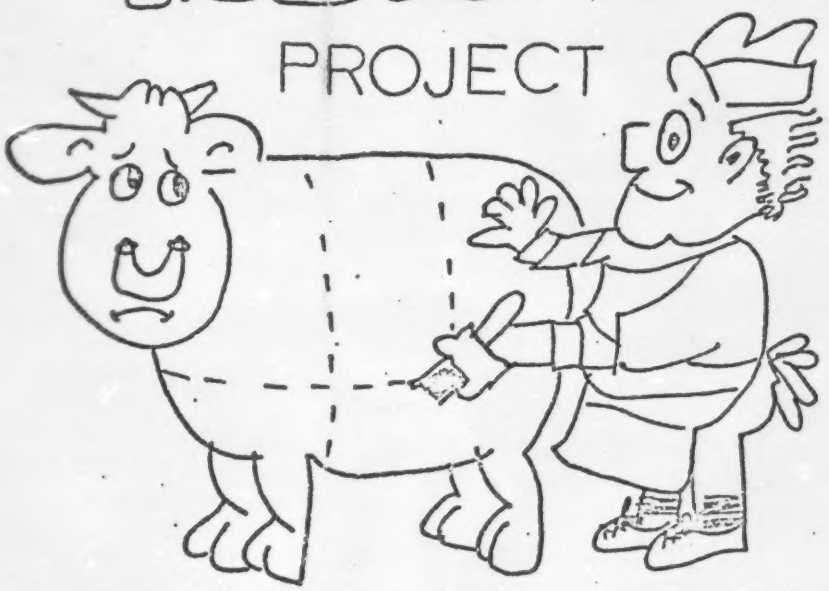
A MEATY PROJECT



A LEARNING ACTIVITY CAPSULE IN CONSUMER OPERATIONS SURVIVAL TRAINING

DEVELOPED BY
VIRGINIA WILLIAMS
FOR
Project COST
ESEA Title IV
Kansas State Dept. of Education
USD 449
Easton, KS 66020

SP 012 764

TEACHER'S GUIDE

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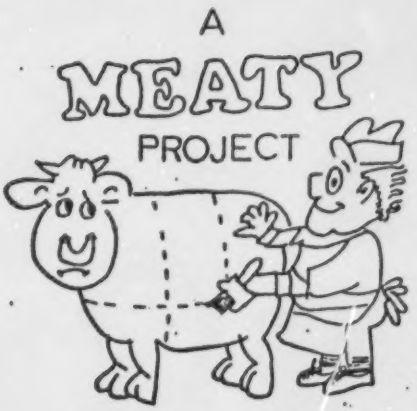
PACKAGE RESUME



Publication Date: May 1980
Level/Subject: Jr. High/ Home Economics
Title: A Meaty Project
Author: Virginia Williams

Abstract: A Meaty Project is a one-capsule package which introduces students to the different kinds of ground beef available to consumers. One major experiment and several activities make the student aware that the cost and quality of ground beef depend upon the source from which it comes. Activities also require the student to determine how the four types of ground beef can be used.

The students completing this capsule will need to have access to a kitchen or an electric skillet in order to do the experiment. Students are also asked to make a visit to a supermarket in order to do some comparison pricing of ground beef types. This may be done as a homework assignment or as a class trip.

The estimated time of completion for this capsule is four to six hours. Students may work individually or in groups of 3 or 4.

OBJECTIVES

Upon completion of this capsule your students will be able to:

identify sources of meat for ground beef.

evaluate the types of ground beef to determine how each can best be used by the consumer.

General Information

This is a learning capsule. It contains many activities to help your students learn. There are three parts or sections to the capsule. Students do not need to do all of the activities in each section.

Before beginning the capsule, students will take a pre-test to see what they already know about the material in the capsule. After they finish the activities in the capsule, they will be asked to take a post-test.

Students are responsible for keeping records of their progress in the capsule. A copy of the Record Sheet is found in the appendix of this guide.

ASSESSMENTS

Pre/post-tests are included in this capsule so that you may assess your students' growth. The pre-test may identify students who already have the skills taught in this capsule. A student who scores 90-100% on the pre-test should immediately take the post-test. If a similar score is achieved, that student should not complete the capsule. You may wish to have him/her go directly to the Quest activity since this will be more challenging. A copy of the pre/post-test keys may be found on pages 7-8 of this guide.

ACTIVITIES

Materials listed with each activity are those that the teacher should have available for her own use or for that of her students.

Activity 1

Materials needed: World Book Encyclopedia or pamphlet showing cuts of meat, colored pencils or markers, worksheets for students.

Copies of the worksheets may be kept in a folder or manila envelope. A copy of the worksheet is included in the appendix of this guide. Page 6 of the guide has a key for the activity.

Activity 2

Materials needed: File folder, envelope, glue, copy of puzzle, directions, key from appendix, piece of cardboard or tagboard 8½ inches by 11 inches, laminating film, x-acto knife.

Glue the picture from the appendix onto the cardboard. Cut the pieces of the picture apart, being careful not to destroy the frame. Glue the frame to the inside of the folder. Place the pieces in the envelope. Glue the envelope to the folder. Put the directions on the front of the folder and the key on the back. Laminate the folder if laminating is available.

Activity 3

Materials needed: Paper for word search, pencil

Student is directed to make up a word search about the four types of ground beef.

Activity 4

Materials needed: none

Student is directed by the capsule to go to the supermarket and buy ¼ pound of at least two of the four types of ground beef studied. This activity may be done in groups of 3 or four students or as a homework assignment.

Activity 5

Materials needed: Graph paper, pencils

Again the student is directed to go to the supermarket. He/she is to make a bar graph comparing the prices of the four types of ground beef studied. Students with limited experience in making graphs, may need additional help on this activity.

Activity 6

Materials needed: access to kitchen or electric skillet, ¼ lb. of at least two of the four types of ground beef, small scales (16 oz.) 2 small jars, spatula, copies of worksheet.

It is absolutely necessary for students to complete this activity. The ground beef bought in activity 5 may be used, or you may wish to provide the ground beef for students to use. Copies of the worksheet may be kept in a manila envelope. Students may work individually or in groups of 3 or 4. It is suggested that the teacher be present while students cook the ground beef. Stress to students the importance of accurate measurements in completing this experiment. A copy of Worksheet #2 is found in the appendix of this guide. Since answers will vary, no key is included.

Activity 7

Materials needed: copies of worksheet #3

Copies of the student worksheet may be kept in a manila envelope or file folder. A copy of the worksheet is found in the appendix. On page 6 of this guide you will find a copy of the key.

Activity 8

Materials needed: index cards, recipe books

Students are to make recipe cards of recipes using ground beef. They are to mark the type of ground beef to be used in each recipe on the card.

Activity 9

Matreials needed: index cards

Encourage students to exchange recipes and make their own collection for later use. You may wish to have students make a recipe box to keep recipes in.

Quest Activity

The quest activity is designed to take students beyond the scope of the capsule. This activity is not required, but students should be encouraged to try it if they enjoyed the capsule. You may wish to have students contract with you for the quest activity. A copy of a Quest Contract form is included in the appendix for your use.

BIBLIOGRAPHY

How to Buy Food. Information Division, Agriculture Marketing Service, U. S. Department of Agriculture, Washington, D.C. 20250 Cost: 50¢

Hamburger--Umpteen Different Ways. For the 10 Good Reasons Series. Hunt-Wesson Kitchens, Box 3331, Fullerton, California 92634. Cost: free.

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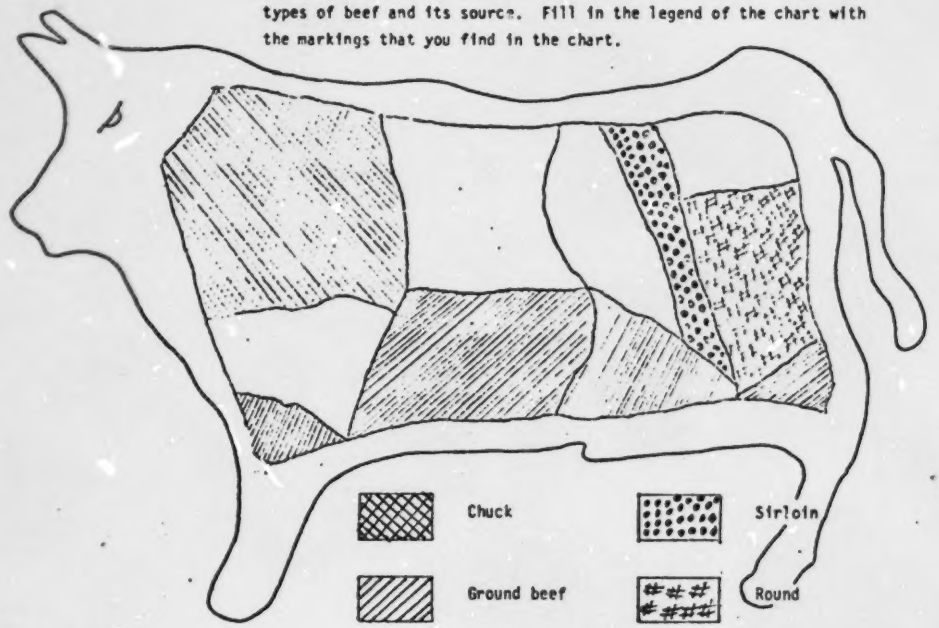
A Meaty Project
Worksheet #1

Name Key Date _____

DIRECTIONS: Use an encyclopedia or a pamphlet with meat cuts to help you complete this worksheet. On the chart below find each of the types of beef and its source. Fill in the legend of the chart with the markings that you find in the chart.



A Meaty Project
Worksheet #3

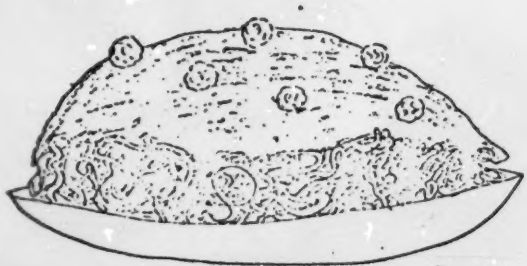
Name Key Date _____

DIRECTIONS: Match the following types of hamburger with the recipe you would use with it. Put the correct number in the blanks.

1 or 2 hamburger
1 or 2 spaghetti sauce
3 or 4 low calorie meat patty
1 Salisbury steak
1,2 meat loaf
2 meatball stew
3 ground sirloin steak
1,2,4 hamburger stroganoff
1,2 pizza
2 tacos
2 ranch house stew
2 hamburger gravy
1,2 cheeseburger
2 lasagne

1. ground chuck
2. ground beef
3. ground sirloin
4. ground round

Answers to these may vary somewhat.



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A Meaty Project
Pre-test

Name Key Date _____

Mark T in the space below if the statement is true. Mark F if it is false.

F 1. There are only two types of ground beef.
T 2. Ground beef comes from certain cuts of beef.
F 3. All hamburgers are juicy.
T 4. Ground beef helps save time and money.
T 5. Ground round comes only from round steak.
F 6. One pound of ground beef makes four servings.
T 7. Sirloin can be made into ground sirloin, but it is the highest priced ground beef.
F 8. Ground beef is always cooked by pan-frying.
T 9. Ground beef is economical because it can be used in a variety of different appetizing main dishes.
F 10. Ground beef should not be used in food for special occasions.

A Meaty Project
Post-test

Name Key Date _____

Read the statemenst below. Circle the letter of the one best answer.

1. Ground beef comes from
   a. all parts of the cow.
   b. only a small section of the carcass.
   (c.) several parts of the carcass.
   d. loin and rib sections of the carcass.

2. The type of ground beef that gives the most lean meat is ground
   (a.) sirloin.
   b. chuck.
   c. beef.
   d. round.

3. The type of ground beef that will cost you less per pound is
   a. ground round.
   b. ground chuck.
   (c.) regular ground beef.
   d. ground sirloin.

4. The type of ground beef that will have the most fat is
   (a.) regular ground beef.
   b. ground round.
   c. ground sirloin.
   d. ground chuck.

BEST COPY AVAILABLE

5. Ground sirloin is the most expensive ground beef because

   a. it contains no fat.
   b. very few people use it.
   (c.) it comes from a small section of the carcass.
   d. there is great demand for it.

6. Janet is making spaghetti for a large group of people. She wants the meal to cost as little as possible. Which type of ground beef should she use for her spaghetti?

   a. ground round
   b. ground sirloin
   (c.) regular ground beef
   d. ground chuck

7. Your boss is coming for a cook-out on your new patio. The menu calls for grilled ground beef steaks to be served with a baked potato. What type of ground beef would make the best bacon wrapped steaks for this special occasion?

   a. ground beef
   b. ground chuck
   (c.) ground sirloin
   d. ground round

8. You are on a diet. You are told to eat a lot of quite lean ground beef. What type of ground beef is best for you diet without wrecking your budget?

   (a.) ground round
   b. ground beef
   c. ground chuck
   d. ground sirloin

A meaty Project
Post-test (Cont.)

9. Ground beef is very popular for several reasons. Which of the statements below is <u>not</u> a reason for its popularity.

   a. It's easy to prepare.
   b. Ground beef makes delicious and satisfying dishes.
   (c.) It is expensive.
   d. It saves time in cooking.

10. Ground round is meat from

   a. flank.
   b. brisket.
   c. sirloin only.
   (d.) round only.

APPENDIX

This appendix contains copies of all worksheets and assessments. These copies may be used to make your own classroom quantity copies. To use, unstaple the sides of the teacher's guide and remove the worksheet and assessment pages. Restaple the remaining pages of the teacher's guide.

QUEST CONTRACT

I will complete Quest Activity _____ by _____. When I have finished with this Quest, I will give my work to my teacher.

_____ date

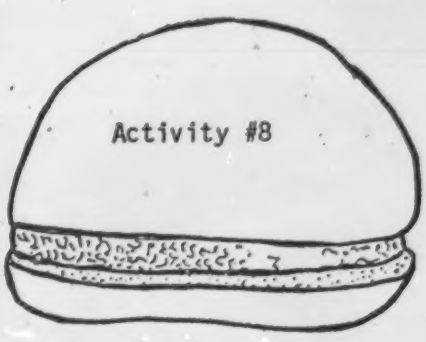
_____ student

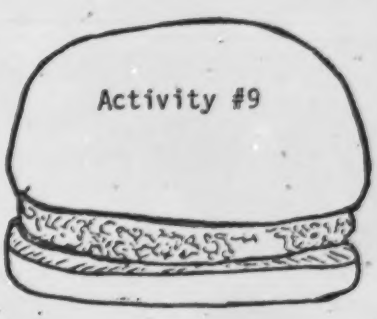
_____ witness

RECORD SHEET

10

NAME _____





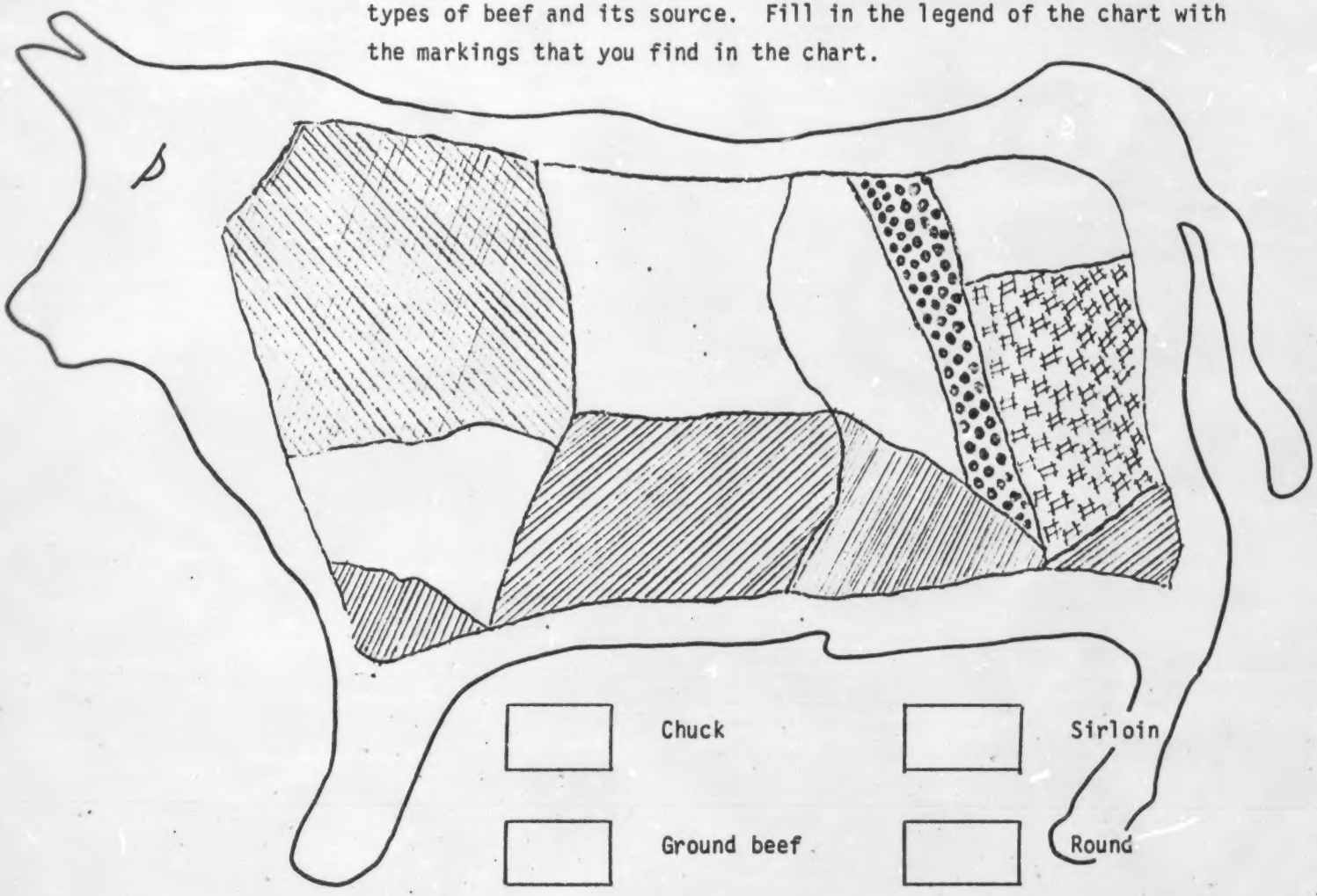
Pre-test Score _____

Post-test Score _____

A Meaty Project
Worksheet #1

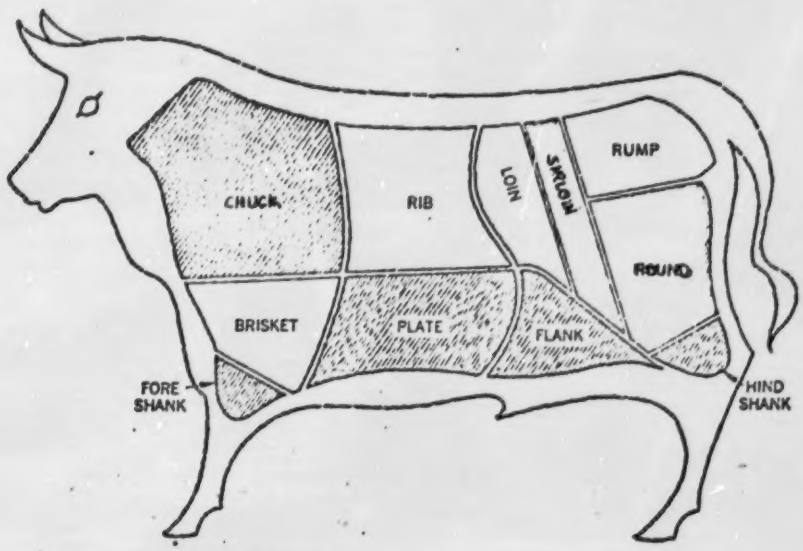
Name _____ Date _____

DIRECTIONS: Use an encyclopedia or a pamphlet with meat cuts to help you complete this worksheet. On the chart below find each of the types of beef and its source. Fill in the legend of the chart with the markings that you find in the chart.

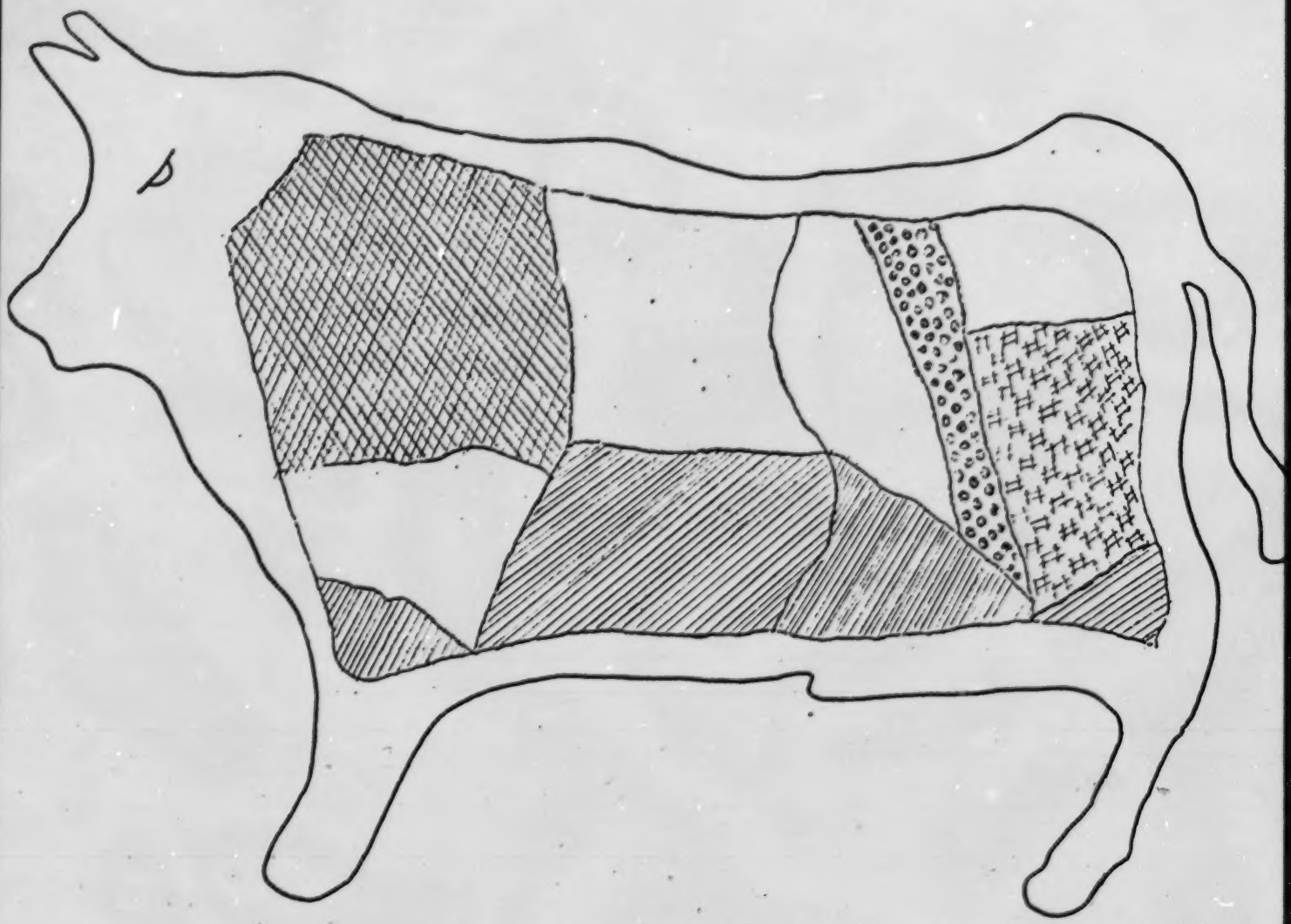


DIRECTIONS FOR CUTS OF MEAT PUZZLE: Use the pieces inside this envelope to put the puzzle below together. Check your work with the answer key on the back of this folder.

KEY



Cut on the dotted lines and use the pieces above with the drawing on the next page to make the Parts of Meat Puzzle as described in the teacher's guide.



A Meaty Project
Worksheet #2

Name _____ Date _____

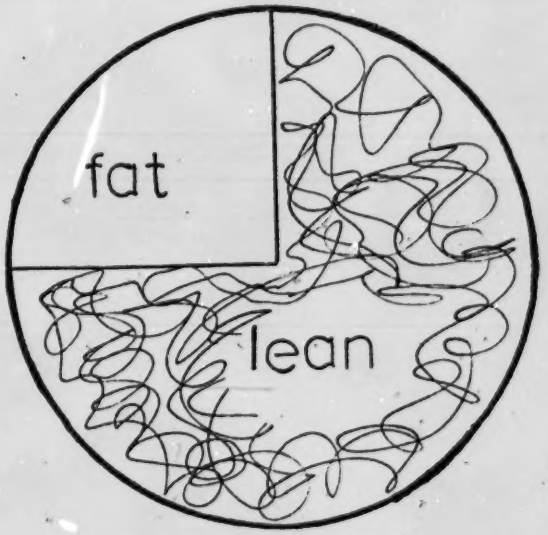
After completing Activity 6 weigh the cooked meat and the fat. Use 4 oz. as 100% and make a cricle graph showing the % of lean meat and % of fat.

THIS IS HOW TO MAKE A CIRCLE GRAPH. 4 oz. = 100% of the circle. Weigh the number of ounces of meat that you have left and put this number over 4 to make a fraction. Let's suppose that you have 3 ounces of meat left after cooking. To make a fraction put the 3 over the original 4 ounces (3/4). Since a complete circle is 360^{0}, multiply your fraction by that number. In our example this would be 3/4 x 360 = 270^{0}.

$^{3}/_{4} \times 360 = 270°$

If fat weighs 1oz.

$^{1}/_{4} \times 360 = 90°$



Using a protractor, we now measure 270^{0} on the circle. This shows the percentage of lean beef. Not to find the percentage of fat, we repeat the procedure. If the fat and lean meat do not total an exact 4 ounces, do not be alarmed. You have not made a mistake. The difference is due to water evaporation. Mark the remaining part of the circle as water. There may be some error in the amounts because of the inaccuracy of your scales, but do not be concerned with this. Be as exact as you can.

A Meaty Project
Worksheet #2 (Cont.)

Weight of meat = _____

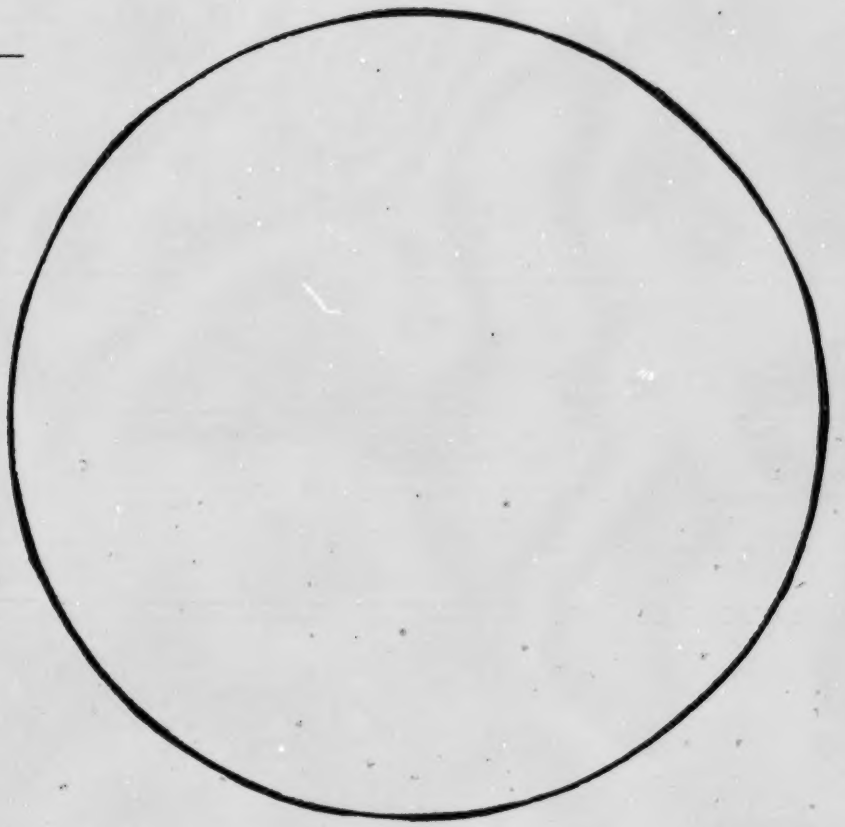
/4 x 360 = _____

Weight of water (if any) = _____

/4 x 360 = _____

Weight of fat = _____

/4 x 360 = _____



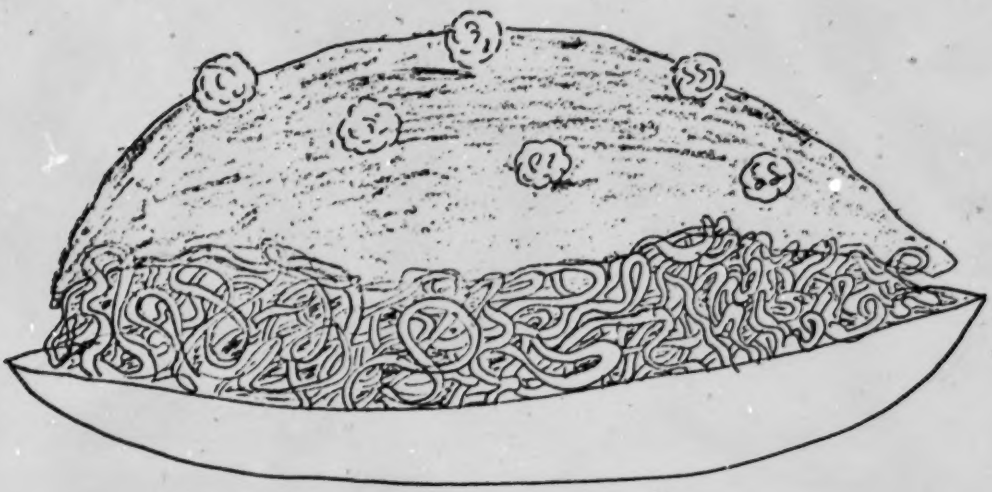
A Meaty Project
Worksheet #3

Name _____ Date _____

DIRECTIONS: Match the following types of hamburger with the recipe you would use with it. Put the correct number in the blanks.

_____ hamburger
_____ spaghetti sauce
_____ low calorie meat patty
_____ Salisbury steak
_____ meat loaf
_____ meatball stew
_____ ground sirloin steak
_____ hamburger strogan.off
_____ pizza
_____ tacos
_____ ranch house stew
_____ hamburger gravy
_____ cheeseburger
_____ lasagne

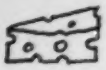
1. ground chuck
2. ground beef
3. ground sirloin
4. ground round



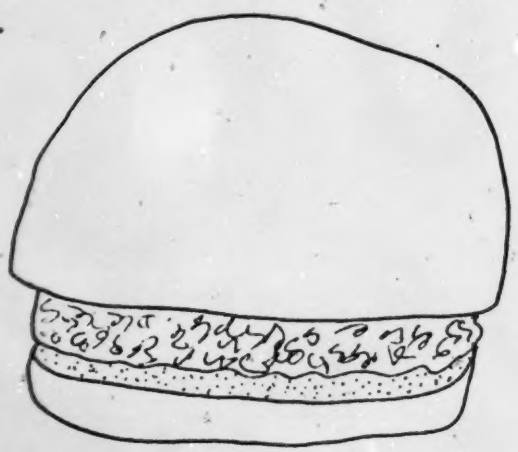
QUEST ACTIVITY WORKSHEET

Name _____ Date _____

Go to the grocery store or supermarket and price the following items. Put the price on the first line.

_____	ground beef (1 pound)	_____ ¢	(4)
_____	buns (pkg. of 8)	_____ ¢	(8)
_____	lettuce (head)	_____ ¢	(20)
_____	onion (1 pound)	_____ ¢	(15)
_____	 cheese (8 ounces)	_____ ¢	(16)
_____	tomato (1 pound)	_____ ¢	(15)
_____	pickle (12 oz. jar)	_____ ¢	(12)

To find the cost of your cheeseburger you will need to know the unit price of each of the items above that you put on the hamburger. The numbers in parentheses () are the approximate numbers of servings in each of the items. To find the unit price, divide the cost of the item by the number of servings. Write the unit price on the second line by each item. To find the total cost of the hamburger, add the unit prices of all the items to be included. Write the total price of your cheeseburger in the hamburger below.



A Meaty Project
Pre-test

Name _____ Date _____

Mark T in the space below if the statement is true. Mark F if it is false.

_____ 1. There are only two types of ground beef.

_____ 2. Ground beef comes from certain cuts of beef.

_____ 3. All hamburgers are juicy.

_____ 4. Ground beef helps save time and money.

_____ 5. Ground round comes only from round steak.

_____ 6. One pound of ground beef makes four servings.

_____ 7. Sirloin can be made into ground sirloin, but it is the highest priced ground beef.

_____ 8. Ground beef is always cooked by pan-frying.

_____ 9. Ground beef is economical because it can be used in a variety of different appetizing main dishes.

_____ 10. Ground beef should not be used in food for special occasions.

Post-test

Name _____ Date _____

Read the statements below. Circle the letter of the one best answer.

1. Ground beef comes from
   a. all parts of the cow.
   b. only a small section of the carcass.
   c. several parts of the carcass.
   d. loin and rib sections of the carcass.

2. The type of ground beef that gives the most lean meat is ground
   a. sirloin.
   b. chuck.
   c. beef.
   d. round.

3. The type of ground beef that will cost you less per pound is
   a. ground round.
   b. ground chuck.
   c. regular ground beef.
   d. ground sirloin.

4. The type of ground beef that will have the most fat is
   a. regular ground beef.
   b. ground round.
   c. ground sirloin.
   d. ground chuck.

5. Ground sirloin is the most expensive ground beef because

   a. it contains no fat.
   b. very few people use it.
   c. it comes from a small section of the carcass.
   d. there is great demand for it.

6. Janet is making spaghetti for a large group of people. She wants the meal to cost as little as possible. Which type of ground beef should she use for her spaghetti?

   a. ground round
   b. ground sirloin
   c. regular ground beef
   d. ground chuck

7. Your boss is coming for a cook-out on your new patio. The menu calls for grilled ground beef steaks to be served with a baked potato. What type of ground beef would make the best bacon wrapped steaks for this special occasion?

   a. ground beef
   b. ground chuck
   c. ground sirloin
   d. ground round

8. You are on a diet. You are told to eat a lot of quite lean ground beef. What type of ground beef is best for you diet without wrecking your budget?

   a. ground round
   b. ground beef
   c. ground chuck
   d. ground sirloin

A meaty Project
Post-test (Cont.)

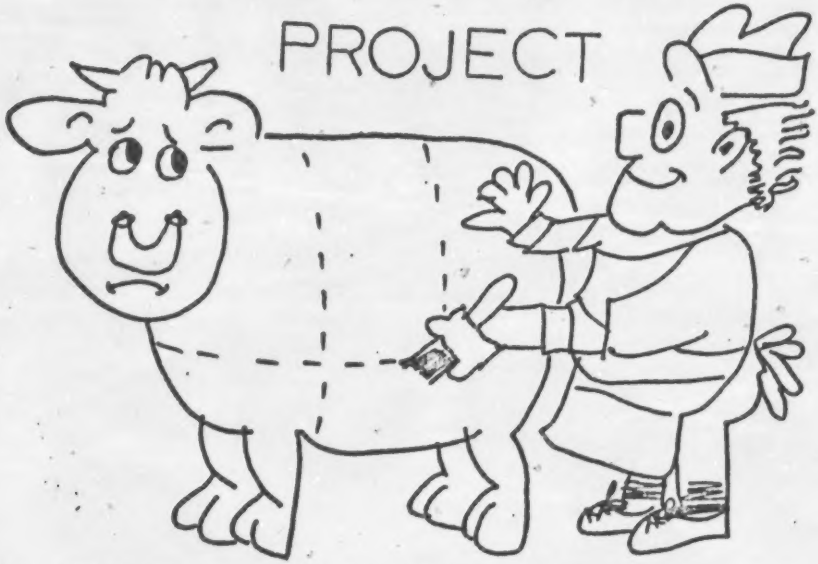
9. Ground beef is very popular for several reasons. Which of the statements below is <u>not</u> a reason for its popularity.

   a. It's easy to prepare.
   b. Ground beef makes delicious and satisfying dishes.
   c. It is expensive.
   d. It saves time in cooking.

10. Ground round is meat from

   a. flank.
   b. brisket.
   c. sirloin only.
   d. round only.

A MEATY PROJECT



A LEARNING ACTIVITY CAPSULE IN CONSUMER OPERATIONS SURVIVAL TRAINING

Student Material

DEVELOPED BY
VIRGINIA WILLIAMS
FOR
Project COST
ESEA Title IV
Kansas State Dept. of Education
USD 449
Easton, KS 66020

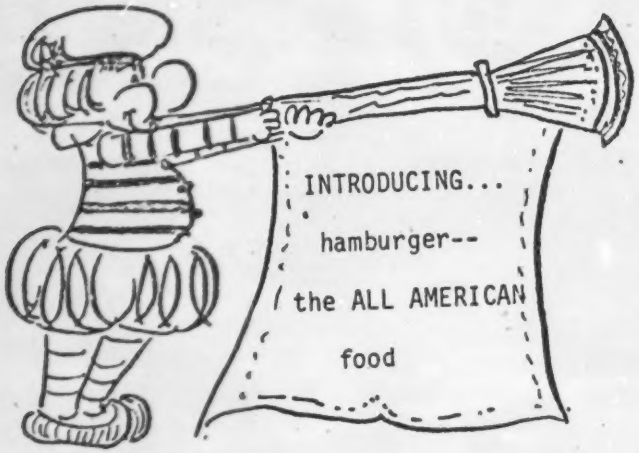
This is a learning capsule. It contains many different activities to help you learn. There are three parts or sections to this capsule. You will not do all of the activities in each section. Sometimes you will be told which activities you are to do. Sometimes you will be able to choose the ones that you wish to do.

Before you begin, you will complete a pre-test to see what you already know about the material in the capsule. After you finish the activities you will be asked to take a post-test.

As you work in the capsule, here are some things that you need to remember:

- Read all of the material in the capsule.
- Keep your work from each section together.
- Let your teacher look over your work as you complete each activity.
- After you complete an activity mark the date on your Record Sheet.
- Your teacher will tell you where to find the materials that you will need to complete the activities.
- Do <u>not</u> write in this capsule unless you are told to do so by your teacher.

IT IS TIME TO GET THE PRE-TEST FROM YOUR TEACHER!!!



Hamburger was first used in America-so it is truly all American. Ground beef is one of our biggest helps in managing time and money.

Today inflation is plaguing our nation. Americans must watch their pennies. How can ground beef save money? This capsule will inform you and make you a better shopper. It will help you get your money's worth in purchasing meat--or to be more exact--help you to buy a better hamburger.

objectives

Upon completion of this capsule you will be able to:

* identify sources of meat for ground beef.
* evaluate the types of ground beef to determine how it can best be used by the consumer.

All hamburger is not the same. If you look in the grocery store, you will find that some ground beef is more expensive than others. The part of the cow the ground beef comes from affects the quality--and therefore the price.

Ground beef can come from any part of the whole beef carcass. Usually it includes flank, shank, plate and heel of round.

1. REGULAR GROUND BEEF usually contains about 20-25% FAT and is LOWER IN PRICE.

2. Ground beef labeled GROUND CHUCK uses only meat from the chuck. It contains 10-20% FAT and is MEDIUM PRICED.

3. GROUND ROUND is meat from the round only. It usually contains LESS THAN 10% FAT and is HIGHER IN PRICE than chuck.

4. GROUND SIRLOIN is meat from the sirloin only, with VERY LITTLE FAT. It is HIGHEST IN PRICE compared to other ground beef.

On the next page are some activities to help you learn about these cuts of meat.

activities

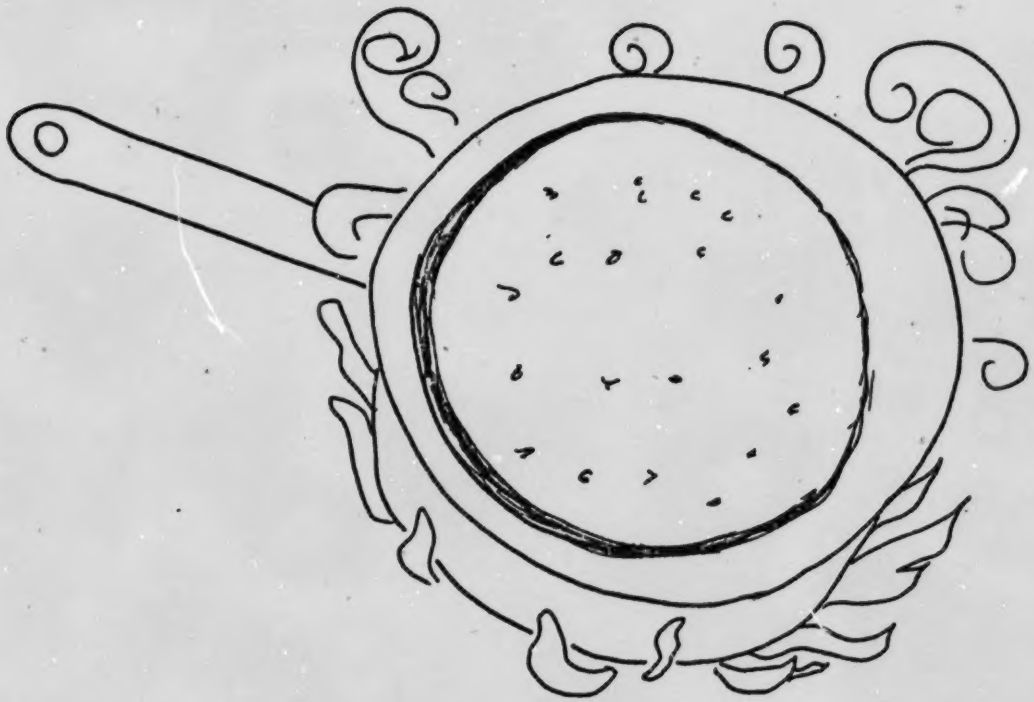
You must complete Activity 1. Then choose one other activity. Turn your papers in to your teacher when you finish. Mark the activity on your record sheet.

1. You will need a World Book encyclopedia or a pamphlet showing cuts of meat, colored pencils or markers, and Worksheet #1 to complete this activity. Follow the directions on the worksheet.

2. Get the Cuts of Meat Puzzle from your teacher. Put the puzzle together. When you finish, write a paragraph on notebook paper telling about each of the four cuts--source, fat content, price.

3. Make up a word search using words and ideas that you have learned in Section One of this capsule. Ask your teacher if you can duplicate your word search for your classmates.

Section Two



In Section One you have learned:

1. there are four types of ground beef.
2. the fat content of each type is different.
3. the fat content affects the price.

In this section you will be completing some activities which will help you to see <u>how</u> the fat content of ground beef affects its price and use.

activities

Choose <u>either</u> Activity 4 <u>or</u> Activity 5.

4. Visit a meat department of a grocery store. Find as many of the four different types of ground beef as you can. Buy ¼ pound of each type. Be sure that the type is labeled on the package.

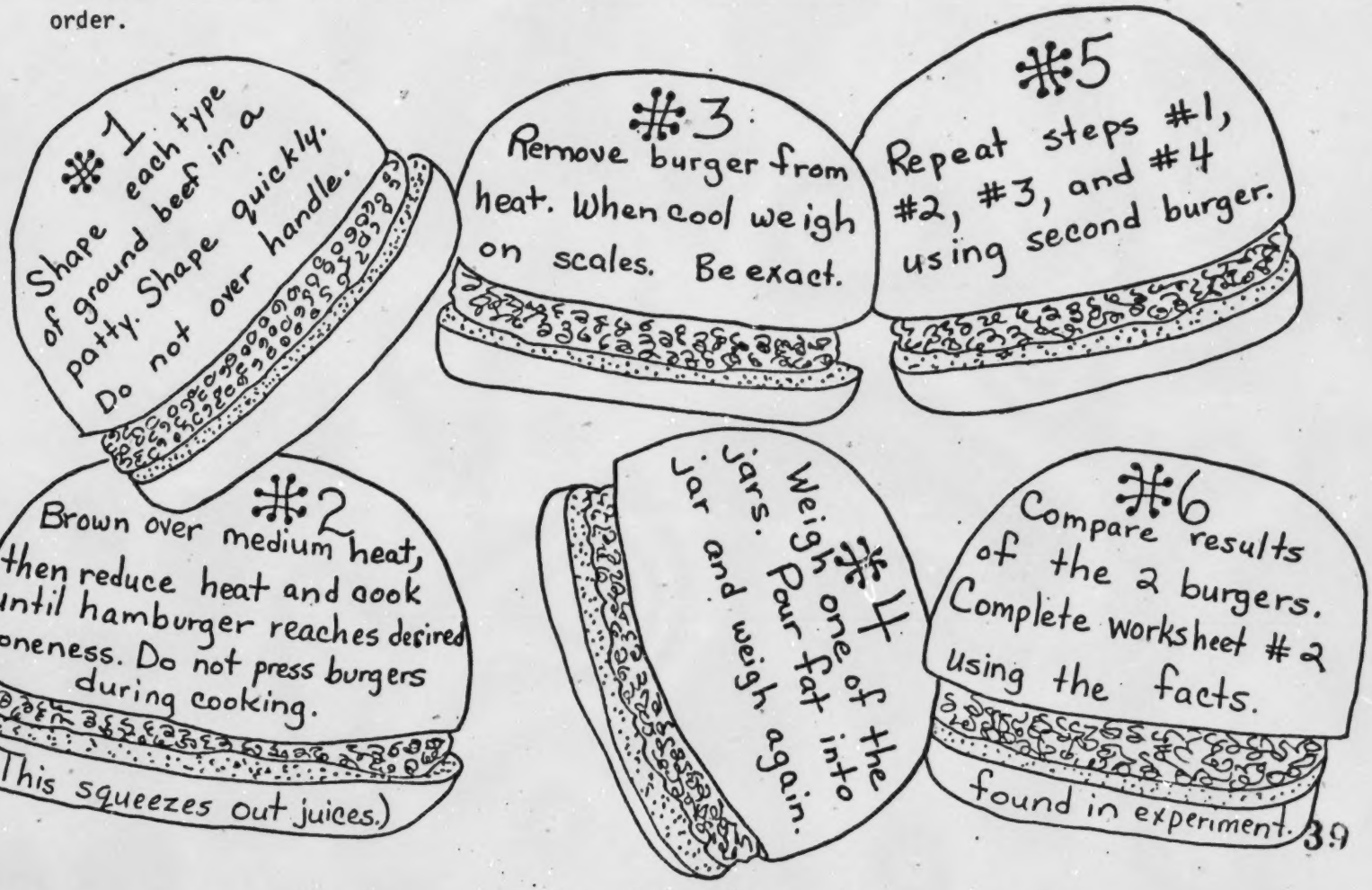
   Go on to Activity 6.

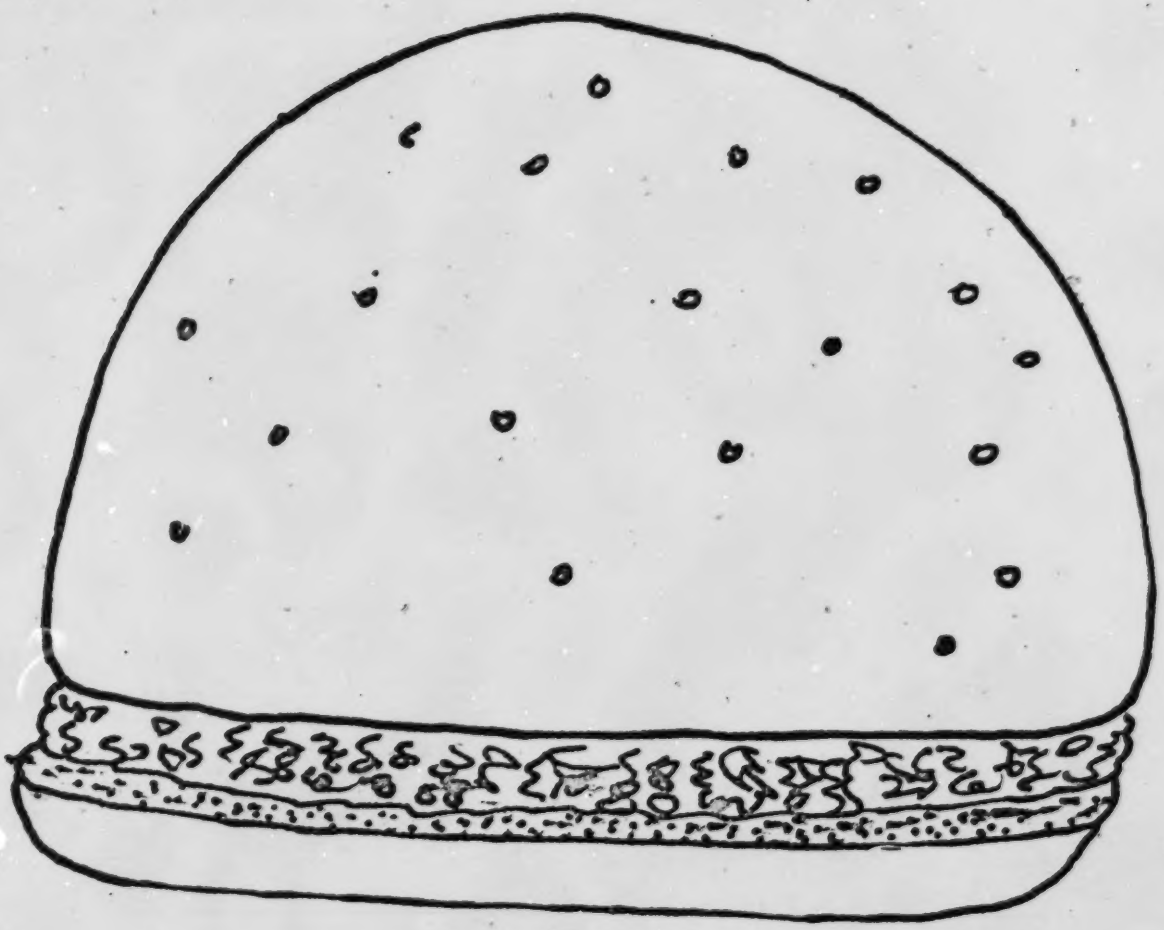
5. Visit a meat department of a grocery store. Find as many of the four types of ground beef as you can. Write down the price per pound of each type available. Make a bar graph showing the price per pound of each type. If you need help making the graph, see your teacher.

   Go on to Activity 6.

YOU MUST DO ACTIVITY 6. You may choose to do it with 3 or 4 other students. However, each of you must complete the worksheet.

6. In order to do this activity, you will need a kitchen or an electric skillet. You will also need the following materials: at least 2 types of ground beef (¼ lb. each), skillet, scales (small 16 oz.), 2 small jars, spatula, Worksheet #2. Follow the directions on each of the hamburgers, in the numbered order.


#1
Shape each type of ground beef in a patty. Shape quickly. Do not over handle.
#2
Brown over medium heat, then reduce heat and cook until hamburger reaches desired doneness. Do not press burgers during cooking.
(This squeezes out juices.)
#3
Remove burger from heat. When cool weigh on scales. Be exact.
#4
Weigh one of the jars. Pour fat into jar and weigh again.
#5
Repeat steps #1, #2, #3, and #4 using second burger.
#6
Compare results of the 2 burgers. Complete worksheet #2 using the facts.
found in experiment.



Section Three

You have been introduced to the sources of ground beef. You have done an experiment to show you how at least two of the types of ground beef shrink when cooked. In this section you will be learning how to deal as a consumer with the quality and cost of ground beef.

GROUND CHUCK is 10-20% fat and is generally medium priced. It is used in meatloaves, hamburgers and casserole dishes. This meat is used well with "stretchers".

GROUND ROUND is usually less than 10% fat and higher in price than chuck. It is used by weight watchers to make meat patties, because of its low fat content. You might use ground chuck when you want leaner types of meat for pizza, beef stroganoff and other "special dishes".

GROUND SIRLOIN is meat from the sirloin with very little fat. It is higher in price than other ground beef types. Ground sirloin is used for ground sirloin steaks wrapped in bacon. Company dishes are also made with this type.

GROUND BEEF is the economy buy which can be used in any way one's imagination can find--from hamburgers to pizza to casseroles.

activities

Complete activities 7 and 8.

7. Complete worksheet #3. Show your paper to your teacher when you finish.

8. Find 3 recipes using ground beef. Decide which type of ground beef you would use for each recipe. Put your recipes on index cards. Mark the type of beef to be used on each card. Show your recipes to your teacher.

You may do activity 9 if you wish. It is not required.

9. Exchange recipes with other students to make a collection of ground beef recipes. Be sure to mark the type of beef on each card. Let your teacher see your recipe collection.

QUEST

BUILD YOUR OWN CHEESEBURGER. In order to complete this Quest activity, you will need to take the Quest worksheet to the grocery store. Follow the directions on the worksheet. When you finish turn your paper in to your teacher.